

6. Joe

Program Name: Joe.java

Input File: joe.dat

Joe has discovered a literary classic, a wonderful and poignant story about rabbits, believe it or not, in a quest for survival called **Watership Down**, by Richard Adams, published in 1974. He especially loves the preambles for each chapter, which are quotes from other literary classics. For example, the one for the first chapter is an excerpt from Aeschylus, Agamemnon, where Cassandra and the chorus have an exchange.

Chorus: Why do you cry out thus, unless at some vision of horror?
Cassandra: "The house reeks of death and dripping blood."
Chorus: How so? Tis but the odor of the altar sacrifice.
Cassandra: "The stench is like a breath from the tomb."

These preambles are meant to introduce a particularly strong theme for that chapter, in this case introducing Fiver, a small and troubled rabbit who has visions of impending doom for their home, much like the visions of Cassandra.

Joe decides to use some of these preambles in a simple text processing exercise where he takes all the words of the sentence, uppercases and alphabetizes them by length, eliminating punctuation marks and all duplicates. For example, the result of the lines above would be:

AT DO OF CRY OUT WHY YOU SOME THUS HORROR UNLESS VISION
OF AND THE BLOOD DEATH HOUSE REEKS DRIPPING
OF SO BUT HOW THE TIS ODOR ALTAR SACRIFICE
A IS THE FROM LIKE TOMB BREATH STENCH

Input: Several lines of text as shown in the sample input below. No punctuation symbols are to be included in the resulting words, including periods, commas, question marks, exclamation marks, or quotes. There will be no hyphenated words or contractions in the data.

Output: For each line of text, output all words in alpha order by size, as described above and shown below.

Sample input:

Why do you cry out thus, unless at some vision of horror?
"The house reeks of death and dripping blood."
How so? Tis but the odor of the altar sacrifice.
"The stench is like a breath from the tomb."
The darksome statesman, hung with weights and woe
Like a thick midnight fog, moved there so slow

Sample output:

AT DO OF CRY OUT WHY YOU SOME THUS HORROR UNLESS VISION
OF AND THE BLOOD DEATH HOUSE REEKS DRIPPING
OF SO BUT HOW THE TIS ODOR ALTAR SACRIFICE
A IS THE FROM LIKE TOMB BREATH STENCH
AND THE WOE HUNG WITH WEIGHTS DARKSOME STATESMAN
A SO FOG LIKE SLOW MOVED THERE THICK MIDNIGHT